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Pelleted Feeds with and without Antibiotics for Fattening Lambs

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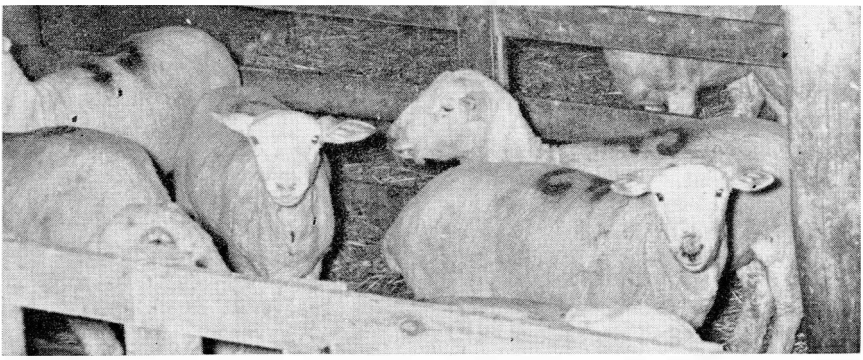

pelleted feeds
WITH AND WITHOUT ANTIBIOTICS
for fattening lambs

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More and more stockmen are using or considering the use of pelleted feeds and antibiotics. Though research has been conducted on both of these for various livestock, more information was needed on (1) whether or not it paid to pellet rations for fattening lambs and (2) the value of antibiotics in their ration.

Pelleted rations have a number of advantages. One must determine if these advantages offset the extra cost. Pellets can be self-fed more easily and with less labor than meal-type rations or when the concentrates are mixed with chopped hay.

Another advantage is that there is less waste during handling and feeding. Then too, the feed isn't dusty, and the lambs aren't able to sort the feed. Some experiments with pelleted rations have shown an increase in growth rate and feed efficiency.

Antibiotics have been shown to benefit certain livestock under certain conditions. Some antibiotics have promoted growth and thrift in swine and poultry. Young dairy calves were found to have less scouring and a little faster growth rate. Antibiotics added to high

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roughage rations of fattening lambs have given more rapid gains. Response of lambs to antibiotics in high concentrate rations has not been consistent.

CONDUCT TWO TRIALS

Two feeding trials were conducted during the spring of 1954 and 1955. A total of 80 feeder lambs were used. They were vaccinated against overeating disease and shorn prior to being placed on trial. The lambs were housed in a barn and given access to a small outside exercise lot. Fresh water and salt were always available.

There were four lots of 12 lambs each in trial 1. They were full-fed the following rations by weight:

Lot 1—approximately half long alfalfa hay and half shelled corn.

Lot 2—pelleted ration of equal parts alfalfa hay and corn.

Lot 3—same ration as lot 2 plus 10 milligrams of aureomycin per pound of feed.

Lot 4—pelleted ration of three-fourths alfalfa hay and one-fourth corn plus 10 milligrams of aureomycin per pound of feed.

Three-tenths of a pound of long alfalfa hay per lamb was also fed daily to lots 2, 3, and 4. All hay fed was of good quality.

In trial 2, four lots of eight lambs each were fed the same rations as in trial 1, with several exceptions. Lambs in all lots were each fed one-tenth of a pound of soybean oil meal pellets daily in addition. Long hay was fed to lambs in lots 2, 3, and 4 for only the first 10 days of the trial.

Rate of gain, feed efficiency, carcass grade, and carcass yield were obtained on the various lots. Results are presented in table 1.

RESULTS OF TRIALS

Effects of Pelleting

In both trials, lambs fed the pelleted ration (lot 2) gained slightly faster than those fed long hay and shelled corn (lot 1). However, the difference was not significant. Lambs fed the pelleted ration plus a small amount of long hay ate slightly more feed daily than those in lot 1.

The lambs in all lots were fed as much as they would eat. Average feed required per hundred pounds gain for the two trials was less for lambs fed the pelleted ration, but the feed cost was higher. This was due to the pelleting cost, which amounted to about $3 for the feed needed to produce a hundred pounds gain.

Average carcass yield for the two trials slightly favored lambs fed the pelleted ration. However, their carcass grade was about one-third of a standard grade lower than those from the non-pelleted ration. In trial 2, lambs fed pelleted rations showed some craving for long dry roughage. They ate some of the bedding when the pens received a new supply.

Effects of Antibiotics

Response of fattening lambs fed rations with aureomycin was not consistent for both trials. In trial 1, lambs fed aureomycin gained slightly faster and more efficiently. In trial 2 they gained considerably less and required more feed per hundred pounds gain.

Table 1. Fattening Lamb Responses to Pelleted Rations and Aureomycin

	Trial 1, 1954				Trial 2, 1955			
	Long Alfalfa, Shelled Corn	50-50 Alfalfa-Corn Pellets	50-50 Alfalfa-Corn Pellets, Aureo.	75-25 Alfalfa-Corn Pellets, Aureo.	Long Alfalfa, Shelled Corn, 0.1 SOM	50-50 Alfalfa-Corn Pellets, 0.1 SOM	50-50 Alfalfa-Corn Pellets, 0.1 SOM Aureo.	75-25 Alfalfa-Corn Pellets, 0.1 SOM Aureo.
	Lot 1	Lot 2	Lot 3	Lot 4	Lot 1	Lot 2	Lot 3	Lot 4
Number of lambs	12	12	12	12	8	8	8	8
Days fed	65	65	65	65	56	56	56	56
Av. initial weight, lbs.	70.9	70.0	69.9	69.3	71.0	74.6	73.6	73.5
Av. final weight, lbs.	104.3	104.8	108.8	106.9	96.9	103.1	96.6	103.4
Gain per lamb, lbs.	33.4	34.8	38.9	37.6	25.9	28.5	23.0	29.9
Av. daily gain, lb.	0.51	0.54	0.60	0.57	0.46	0.51	0.41	0.53
Av. daily feed, lbs.								
Shelled corn	1.67				1.58			
Soybean pellets					0.1	0.1	0.1	0.1
Alfalfa hay	1.70	0.3	0.3	0.3	1.65	0.07	0.07	0.07
Pellets (alfalfa-corn)		3.2	3.2	3.8		3.3	2.9	3.1
Aureomycin per lb., mg.			10	10			10	10
Total av. daily feed, lbs.	3.37	3.5	3.5	4.1	3.33	3.47	3.07	3.27
Feed required per 100 lbs. gain								
Shelled corn	325				341			
Soybean pellets					22	20	24	19
Alfalfa hay	331	62	55	57	358	13	16	12
Pellets (alfalfa-corn)		602	543	662		647	713	581
Total feed per 100 lbs. gain	656	664	598	719	721	680	753	612
Feed cost per 100 lbs. gain*	10.78	13.56	13.03	12.64	12.19	14.75	16.32	11.38
Carcass yield, %	48.7	51.0	49.9	52.9	49.2	48.4	49.9	47.5
Carcass grade	High Choice	Av. Choice	Av. Choice	Av. Choice	Av. Choice	Low Choice	Low Choice	High Good

*Based on the following costs: shelled corn, $46 a ton; soybean oil meal, $70 a ton; alfalfa hay, $20 a ton; aureomycin, 15 cents a gram; grinding, mixing, and pelleting, $10 a ton.

Daily feed consumption of these lambs was about one-third pound less than lambs not fed aureomycin, although both groups were fed all they would eat. Carcass grade and dressing percentage were not significantly affected by adding aureomycin to the ration.

In the two trials, differences in rate of gain and feed efficiency varied between lots 3 and 4. However, on an average for both trials, lambs fed the high roughage ration plus aureomycin gained faster and more efficiently than those fed rations containing half roughage.

Feed cost per hundred pounds gain was lower than for lambs fed the pelleted high concentrate rations. However, feed cost was greater than for lambs fed the nonpelleted ration. This was due to the pelleting and aureomycin costs.

Carcass grade was lower for lambs fed a pelleted ration of three-fourths alfalfa hay and one-fourth shelled corn. The dressing percentage (average for both trials) was somewhat higher for lambs fed this ration.

SUMMARY

Two lamb feeding trials were conducted to determine if it paid to pellet rations and to study the value of antibiotics in fattening rations.

Lambs fed pelleted rations gained slightly faster and more efficiently than those not fed pellets. However, grinding, mixing, and pelleting costs more than offset this advantage.

Carcass yields were slightly higher for lambs fed pelleted rations (average of both trials). The carcass grade was about one-third of a standard grade lower.

Results from adding 10 milligrams of aureomycin per pound of feed were not consistent for both trials. Aureomycin stimulated growth and increased feed efficiency in one trial. In the other there was a depression in rate of gain and in feed efficiency. This variability, similar to that reported by other workers, makes the use of aureomycin for thrifty lambs questionable.

Carcass grade and yield were not significantly affected when aureomycin was added to the ration.

Lambs fed rations of three-fourths alfalfa hay and one-fourth shelled corn plus aureomycin gained faster and more efficiently than those fed half roughage and half concentrate. The carcass grade was lower, however.